

天然膠布 Biodegradable band-aid

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作品簡介 Project Introduction

是次研究利用日常生活中的材料製成生物可降解塑膠並進行各種測試，比較它們於各方面的不同之處。經過多番研究，發現木薯粉混合糯米粉能夠製作較堅韌、耐水性強的塑料，甚至敷料。塑料可製作杯、匙羹、透明膠片及膠布，因其不含致敏原，能降低使用者出現敏感的情況。且效能與市面上的膠布相若，並有更高的透氣度，更強的二次黏性，用後不留痕，同時可生物降解，既環保又能加快痊癒速度。

The research is based on producing biodegradable plastics-like materials at used household products. It can be used to make cup, spoon, bookmark, with laminate effect and even air breathe biodegradable band-aid.

For different purposes, the material is combined with different ratio of amylose, amylopectin, glycerol and water. In this project, the final product has a smooth surface, and being transparent, flexible, water resistant, which durable.

Nowadays, band aid is made of plastic and has a layer of emulsion. Therefore, it is not biodegradable and some people will be allergic on it. Moreover, 73% people using it will finally have Dermatitis. Compared with the current band aid on the market, the new air breath biodegradable band-aid is breathable which can speed up the recovering time.



主要獎項 Major Awards

- 獲國際天文學聯會把編號 31313 小行星命名為「簡泳怡星」(2014)
International Astronomical Union named the minor planet 31313as “Kan Wing Yi” (2014)
- 入圍第 64 屆英特爾國際科學與工程大獎賽 (2013)二等獎
The 64th Intel International Science and Engineering Fair (2013) 2nd Place Award
- 臺灣國際科學展覽會 2013 環境科學 三等獎
Taiwan International Science Fair 2013 3rd Place Award in Environmental Science
- 國際兒童科學及數學節 2013 一等獎
International Children’s Science and Maths Festival 2013 1st Place Award
- 第 27 屆全國青少年科技創新大賽(2012) 一等獎
The 27th China Adolescents Science and Technology Innovation Contest (2012) 1st Place Award
- 香港青少年科技創新大賽 12-13 最優秀項目大獎(初中)、生物及健康 一等獎
HK Youth Science and Technology Innovation Competition 12-13
Best Project Award (Junior), 1st Place Award in Biology & Health
- 香港青少年科技創新大賽 11-12 最優秀項目大獎(初中)、化學及材料 一等獎
HK Youth Science and Technology Innovation Competition 11-12
Best Project Award (Junior), 1st Place Award in Chemistry and Materials